RUBBLIZATION MSP02-02A

1.0 Description. This work shall consist of shattering and compaction of a reinforced or non-reinforced Portland cement concrete (PCC) pavement to create a rubblized base.

2.0 Material. Filler aggregate shall be Type 5 aggregate in accordance with Sec 1007.

3.0 Construction Requirements.

3.1 Preparation.

3.1.1 Partial depth asphalt patches shall be removed and replaced with filler aggregate.

3.1.2 Full-depth relief joints shall be cut and load transfer devices shall be severed at all termini where the rubblized pavement abuts concrete pavement that is to remain intact.

3.1.3 Edge drains, if any are required, shall be installed prior to rubblization in accordance with Sec 605.

3.2 Rubblization Procedure.

3.2.1 The first lane shall be rubblized 12 inches (300 mm) beyond the centerline or 12 inches (300 mm) beyond the extent of the first asphalt concrete (AC) lift, whichever is greater.

3.2.2 Rubblization equipment shall be equipped with a screen to protect vehicles in the adjacent lane from flying chips.

3.2.3 Underground utilities and drainage structures shall not be damaged during rubblization.

3.2.4 Dispersion of dust from rubblization shall be minimized with a method approved by the engineer.

3.3 Quality Control.

3.3.1 At the start of the rubblization, a 100 foot (30 m) test strip shall be rubblized. The engineer will select a 4 x 4 foot (1.3 m x 1.3 m) area in the test strip for excavation and visual evaluation. The top half shall be manually removed and the bottom half below the steel shall be manually or mechanically removed to verify conformance with Sections 4.3.2 and 4.3.3. For the remainder of the project, one test hole per ⅓ lane-mile (½ km) shall be excavated and inspected unless waived by the engineer. Test holes shall be backfilled with filler aggregate and compacted.

3.3.2 Rubblization shall reduce the existing concrete pavement into particles with at least 75 percent having the largest dimension not exceeding the following: 3 inches (75 mm) at the surface, 6 inches (150 mm) in the top half and 12 inches (300 mm) in the bottom half.

3.3.3 Reinforcement steel shall be debonded from the rubblized concrete pavement.

3.3.4 Large unstable areas or areas that cannot be adequately rubblized to the specified particle size shall be removed and replaced with filler aggregate as directed by the engineer.

3.4 Compaction.

3.4.1 Reinforcement steel projecting above the rubblized surface shall be cut off below the surface and removed prior to compaction.

3.4.3 Water may used to aid the compaction effort.

3.4.4 The finished surface, after compaction, shall be within a level grade tolerance of ± 1 inches (25 mm) using a 10-foot (3-m) straight edge between any two points on the surface before placing the asphalt overlay. Rubblized pieces projecting above this tolerance shall be removed and replaced with filler aggregate. Depressions exceeding this tolerance depth shall be filled with filler aggregate.

3.5 Traffic Restrictions. Traffic shall not be allowed on the roadway until at least 4 inches (100 mm) of compacted asphalt mix is placed on the rubblized surface.

4.0 Method of Measurement.

4.1 Rubblizing the existing PCC pavement will be measured by area in square yards (m^2).

4.2 Filler aggregate will be measured in weight by tons (mass by kg).

5.0 Basis of Payment.

5.1 Rubblizing existing concrete pavement will be paid for at the contract unit price per square yard (m^2). Payment will be considered full compensation for cutting relief joints at PCC pavement termini, rubblizing the pavement; excavating and backfilling test holes, dust suppression, removing and backfilling partial depth asphalt patches, repair or replacement of underground utilities and drainage structures damaged during rubblization, removing exposed steel, compacting the rubblized surface, furnishing and adding water, correcting out-of-tolerance surface elevations, maintaining the stabilized condition of the rubblized pavement until overlaid, and all labor, equipment and material to complete the described work.

5.2 Filler aggregate will be paid for at the contract unit price per ton (kg).